科目ナンバリング	U-LAS12 10008 EE57						
授業科目名<英訳>	Elementary Experimental Physics-E2 Elementary Experimental Physics-E2			担当者所属職名・氏名	理学研究科　教授　WENDELL,Roger 理学研究科　准教授　LEE, Shiu Hang 工学研究科　講師　林　聖勳 人間・環境学研究科　物理学実験授業担当教員		
群	自然科学科目群			分野(分類)	物理学(基礎)	使用言語	英語
旧群	B群	単位数	2単位	週コマ数	2コマ	授業形態	実験（対面授業科目）
開講年度・開講期	2026・後期	曜時限	金3・4	配当学年	主として1回生	対象学生	理系向

[授業の概要・目的]

Natural sciences are the product of experimental investigation and theoretical interpretation. In this course, students will learn to use various measurement instruments to perform experiments in topics including atomic, laser, particle, and low temperature physics.

Basic topics in experimental physics will be covered, enabling students to get a deeper understanding of the natural sciences. In addition, techniques for processing and analyzing experimental data will be mastered. Finally, students will learn how to write scientific reports and present their results orally.

[到達目標]

- Learn physics by carrying out experiments and discussing in an open setting
- Learn basic skills for processing and analyzing experimental data.
- Learn how to keep a laboratory notebook, and write up experimental reports.
- Learn to give a scientific presentation explaining the results of an experiment.

Students will be evaluated on these skills on the basis of their experimental reports and contributions to in-class discussions.

[授業計画と内容]

The first week will be an introduction to the course and its experiments.
Thereafter, classes will be divided into Experimental and Discussion sessions.

Experiments will be performed during the Experimental sessions and group discussions of those results and related physics topics will be held in the subsequent Discussion session.

Experiments available in this course include:

1. Measurement of the magnetic field of a coil using a Hall element
2. Thermionic emission experiment
3. Experiments with lasers
4. Measuring the wavelength of light using diffraction gratings
5. Franck-Hertz experiment
6. Measurement of Planck's constant
7. Radiation in the Natural World
8. Measurements of Atomic Spectra
9. Coupled Oscillation Studies
10. Electrical Resistance Measurements

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Elementary Experimental Physics-E2(2)

Students will perform six experiments from this list and give one oral presentation about one of them.

The class will meet 15 times, including the feedback session.

[履修要件]

特になし

[成績評価の方法・観点]

Evaluation will be based on in-lab experimentation, experimental reports (6), and one oral presentation.
Details will be explained in class.

[教科書]

授業中に指示する
Information about the English language textbook specific to the experiments in the course will be provided during the first lecture.

[参考書等]

（参考書）
授業中に紹介する
Additional information will be provided during class as necessary.

[授業外学修（予習・復習）等]

Students should read the textbook ahead of each experimental session.

[その他（オフィスアワー等）]

Students are encouraged to ask questions during the experimental sessions, and are welcome to contact instructors by email outside of class hours.
Students should make sure to attend the first lecture to receive further information about the course and its textbook.
If you decide to take the course, you must have accident insurance such as “Personal Accident Insurance for Students Pursuing Ed. & Rsch.(**学生教育研究災害傷害保険**)”.

[主要授業科目（学部・学科名）]

理学部